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Office of Energy Policy and Systems Analysis, EPSA-60 July 21, 2014
QER Meeting Comments
U.S. Department of Energy
1000 Independence Avenue SW
Washington, DC 20585-0121

RE: Quadrennial Energy Review Natural Gas Transmission, Storage & Distribution, Pittsburgh, Pennsylvania, July 21, 2014

Dear Members of the Quadrennial Energy Review Task Force,

The Pennsylvania Chamber of Business and Industry (PA Chamber), the largest, broad-based business advocacy group in the Commonwealth, appreciates the opportunity to comment on the U.S. Department of Energy's Quadrennial Energy Review Task Force's July 21 public meeting regarding natural gas transmission, storage and distribution.

In recent years, the expanded exploration and production of natural gas from the Marcellus shale in Pennsylvania has led to significant environmental and economic gains. There remain, however, several regulatory constraints that producers and pipeline operators face which, if unresolved, threaten to limit the tremendous potential this resource represents for the state and nation's economy, environment and energy security.

Background on Environmental, Economic and Tax Gains

The state has a long history of being a leader in oil and gas drilling, going back to when the first commercial oil well ever drilled in the United States was struck near Titusville in 1859[1]. This fall will mark the tenth anniversary of the first Marcellus shale well drilled and horizontally hydraulically fractured in the state of Pennsylvania.[2] Production and exploration of Marcellus shale wells began to significantly increase in 2007 and 2008. Year over year, natural gas production from unconventional shale wells in the state continues to increase at a staggering pace,[3] as the following chart shows:

Year	Unconventional Gas Production (Tcf)	Number of Producing Unconventional Shale Gas Wells
2011	1.06	2,256
2012	2.04	3,555
2013	3.1	4,931

[1] Pennsylvania State Energy Plan, Office of Governor Tom Corbett. January 2014. http://energy.newpa.com/wp-content/uploads/2014/01/PA-State-Energy-Plan-Web.pdf
[2] Range Resources Company Timeline. http://www.rangeresources.com/our-company/company-timeline.aspx.
[3] Statewide Data Downloads, various reporting periods, Pennsylvania Department of Environmental Protection. https://www.paoilandgasreporting.state.pa.us/publicreports/Modules/DataExports/DataExports.aspx

Today, the state ranks second in the nation in both natural gas production and electric generation. More than one-fifth of the nation's natural gas production comes from Pennsylvania[4] – and with this production there have been significant economic gains. Total jobs in the oil and gas industry and related sectors total more than 200,000, with the average wage in core industries about $90,000, almost double the average worker's wage across all industries in the state.[5] Job gains in and relating to the oil and gas industry have been a key driver in lowering the state's unemployment rate to 5.6% - a rate below any point during the recession and below that of the current national average.[6]

To date, exploration and production companies have paid landowners and holders of mineral rights in Pennsylvania several billion dollars in royalty payments.[7] In 2012, the state enacted sweeping legislation known as Act 13 or the Oil and Gas Act of 2012 that, in addition to strengthening a variety of environmental regulations, included a per-well impact fee, paid annually to the state, that to date has totaled more than more than $630 million since its inception.[8] While the impact fee is used for a variety of statewide regulatory programs, the majority of the funds are distributed to counties where drilling is taking place. The funds may be used for a variety of purposes, including infrastructure repair, emergency response, social services, conservation, housing and planning.

Pennsylvania is somewhat unique in its local government structure, with more than 2,500 municipalities across the state's 67 counties. Officials of these local governments where drilling is occurring have hailed the impact fee revenues as a source of funding that "helps us not raise taxes" and is "a tremendous help."[9] Another county official noted impact fee revenues have "kept us from having a shortfall in the overall budget."[10]

State tax collections have also benefitted greatly as a result of increased natural gas well and pipeline development. Since 2008, companies involved in Marcellus shale drilling and pipeline operations have paid more than $2.1 billion in state taxes.[11] Further, leasing of state-owned public lands has generated nearly $600 million in the past five years.[12]

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[4] Marcellus Shale drilling becomes more efficient. Philadelphia Inquirer, Dec. 16, 2015. http://articles.philly.com/2013-12-16/business/45219455_1_marcellus-shale-gas-production-terry-engelder

[5] Marcellus Shale Fast Facts. Pennsylvania Department of Labor and Industry, July 1, 2014. http://www.portal.state.pa.us/portal/server.pt?open=514&objID=1222103&mode=2

[6] Pennsylvania Workforce Statistics, Pennsylvania Department of Labor and Industry. May 2014. http://www.portal.state.pa.us/portal/server.pt?open=514&objID=1216762&mode=2

[7] Billions in Gas Drilling Royalties Transform Lives, Associated Press. Jan. 27, 2013. http://bigstory.ap.org/article/billions-gas-drilling-royalties-transform-lives

[8] Corbett Announces Act 13 Impact Fee Revenues to Surpass $630 Million, Office of Governor Tom Corbett. April 4, 2014. http://www.pa.gov/Pages/NewsDetails.aspx?agency=governors%20office&item=15467#.U8Uun7E00pQ

[9] Marcellus Shale impact fee figures released, The Bradford Era. June 3, 2014. http://www.bradfordera.com/news/article_5db9889e-ead3-11e3-b552-0019bb2963f4.html

[10] Increased gas drilling boosts impact fee collection in Armstrong, state, Pittsburgh Tribune Review. June 3, 2014. http://triblive.com/news/armstrong/6022975-74/fees-county-collected#axzz33VXbnHLk

[11] Gas tax could factor into Pennsylvania gubernatorial race, Pittsburgh Tribune Review. March 10, 2014. http://triblive.com/state/pennsylvania/5739452-74/tax-corbett-gas

[12] State reaps $582M windfall on gas drilling in state forests, Pittsburgh Tribune Review. April 16, 2014. http://triblive.com/news/adminpage/5959607-74/gas-state-shale#axzz2z4Q60EVK

The increased development and utilization of natural gas, paired with significant generation assets using other fuel sources, including nuclear, coal and renewable, as well as a competitive generation market, has led to wholesale electricity prices trending downward significantly in recent years, with a more than 50% decrease between 2008 and 2012. [13] Energy prices are one of the reasons that in 2013 more new corporate facilities opened their doors in PA than the rest of the northeastern states combined. [14]

There have also been significant environmental gains in recent years that correlate with the increased production and use of natural gas in the state. According to the U.S. Environmental Protection Agency, "natural gas produces half as much carbon dioxide, less than a third as much nitrogen oxides, and one percent as much sulfur oxides" than other fuel sources[15]. Such emissions reductions are having a real and notable impact in Pennsylvania.

In the power generation sector, where natural gas continues to increase its share of generating capacity, has reduced greenhouse gas emissions in Pennsylvania by 14% since 2005. [16] In fact, America led the world in reducing greenhouse gas emissions over that time period. [17] Industry in the state has also, since 2008, reduced emissions of SO2 by 68%, NOx by 30% and VOCs by 21%.[18] These reductions are having a demonstrated impact on air quality, with DEP forecasting fewer and fewer severe air quality alerts each year[19] – a significant development considering DEP announced two years ago it added eight additional regions, for a total of 13 regions.

Regulatory Constraints

Recommendation: In order to secure the significant environmental and economic impacts from domestic energy development, the PA Chamber urges the Quadrennial Energy Review to propose efficiencies and reforms in the federal permitting of pipelines.

Natural gas is predominantly transported over land by pipelines. At present, there are nearly 10,000 miles of gas transmission and more than 47,000 miles of gas distribution pipeline in the state. [20]

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[13] Pennsylvania State Energy Plan. Office of Governor Tom Corbett, January 2014. http://energy.newpa.com/wp-content/uploads/2014/01/PA-State-Energy-Plan-Web.pdf

[14] Governor Corbett Announces Pennsylvania Ranks First in Northeast Region for New, Expanded Corporate Facilities. Office of Governor Tom Corbett, March 5, 2014. http://www.newpa.com/newsroom/pennsylvania-ranks-first-northeast-region-2013

[15] How does electricity affect the environment? U.S. Environmental Protection Agency. Sept. 25, 2013. http://www.epa.gov/cleanenergy/energy-and-you/affect/natural-gas.html

[16] Electric Power Industry Emissions Back to 1990, Pennsylvania. U.S. Energy Information Administration, April 1, 2014. http://www.eia.gov/electricity/state/pennsylvania/xls/sept07PA.xls

[17] Some fracking good news, *The Economist,* May 25, 2012. http://www.economist.com/blogs/schumpeter/2012/05/americas-falling-carbon-dioxide-emissions

[18] 2012 Natural Gas Emissions Inventory. Pennsylvania Department of Environmental Protection, Air Quality Technical Advisory Committee, April 3, 2014. http://www.dep.state.pa.us/dep/subject/advcoun/aqtac/2014/4-3-14/Marcellus_AQTAC_Unconventional_Gas_03-13-2014.pdf

[19] Action Days. Pennsylvania Department of Environmental Protection, Bureau of Air Quality. http://www.ahs2.dep.state.pa.us/aq_apps/aqpartners/code_red.asp

[20] Pipeline Mileage Overview. U.S. Department of Transportation Pipeline & Hazardous Safety Administration, July 3, 2014. http://primis.phmsa.dot.gov/comm/reports/safety/PA_detail1.html

The continued encouragement of developing this infrastructure is vital to securing the significant downstream economic and environmental benefits that come from the increased use of natural gas. The EPA's Clean Power Plan expects that, given the significant reductions in greenhouse gas emissions that come from combusting the fuel for power generation, 70% of every state's natural gas nameplate capacity should be dispatched.[21] Such dispatch cannot happen without significant additional investment into natural gas pipeline infrastructure.

Pennsylvania broke a 100-year trend in 2011 when for the first time in a century it became a net exporter of natural gas. A recent Bentek analysis noted that inflows into the northeastern United States from the Midwest, Southeast and Canada fell by more than 70% between 2010 and 2013.[22]

A separate analysis by Platts and Bentek Energy noted a "substantial opportunity for natural gas demand growth" in Pennsylvania[23] – perhaps as much as 1 Bcf/day over the next decade, as more residential and commercial buildings switch to natural gas for a heating source, more industrial facilities construct natural gas co-generation or combined heat and power systems, and more new or converted natural gas power plants are constructed. Such increased use of natural gas would represent additional improvements in local, ambient and regional air quality. However, the same analysis noted a significant gap between current and projected natural gas supply and takeaway capacity – i.e., the infrastructure needed to process natural gas and move it to market via pipeline.

A recent analysis noted that while "[l]ast year North America spent nearly $200 billion on producing oil and gas, attracting over 50% of global upstream investment [. . .] the region has also fallen short in building the infrastructure to ensure the benefits of abundant energy supplies can be fully reaped. As temperatures plunged this past winter, gas could not be delivered where it was needed, creating regional price spikes. If these trends continue, North America will not only fail to harness the benefits from the shale revolution it created, but it will also forego over the next decade more than 2 million new jobs, 1.0% of additional GDP growth and at least a 5% incremental reduction in greenhouse-gas emissions."[24]

More infrastructure is planned in Pennsylvania. One report noted that "[m]ore than half of the interstate natural gas pipeline projects proposed to federal energy regulators since early 2010 involve Pennsylvania."[25]

However, PA Chamber members involved in the construction of interstate, midstream and gathering pipelines have noted that significant delay from federal agencies have arisen due to conferencing with the U.S. Fish and Wildlife Service regarding threatened and endangered species, as well as having to obtain

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[21] Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Generating Units. Environmental Protection Agency, June 2, 2014. http://www2.epa.gov/sites/production/files/2014-05/documents/20140602proposal-cleanpowerplan.pdf

[22] NGA 2013 Regional Market Trends Forum: Northeast Supply Dynamics. Bentek Energy, April 30, 2013. http://www.northeastgas.org/pdf/c_foster_bentek.pdf

[23] Northeast Infrastructure Study: Leading the Market in a New Direction. Platts McGraw-Hill Financial & Bentek Energy, Sept. 10, 2013. http://anga.us/media/blog/C2FBB9E8-5056-9F69-D40DD63F89FBD0C3/files/BENTEK_Northeast_InfrastructureDeck_09102013V4.pdf

[24] Unlocking the Economic Potential of North America's Energy Resources." Goldman Sachs, June 10, 2014. http://www.goldmansachs.com/our-thinking/our-conferences/north-american-energy-summit/index.html#naesIntro

[25] Pennsylvania the New Hub of Pipeline Work. Pipeline and Gas Journal, Sept. 2011. http://www.pipelineandgasjournal.com/pennsylvania-new-hub-pipeline-work

Clean Water Act Section 404 permits from the Army Corps of Engineers. As the Interstate Natural Gas Association of America noted in a 2013 report, "[t]he undesirable effects of permitting delays range from increased project costs to missed in-service dates, along with a variety of associated adverse business, environmental, and other consequences."[26]

The PA Chamber urges that the Quadrennial Energy Review note that absent significant permitting reform to improve coordination and efficiency among the various state and federal agencies, the ability to harness the significant economic and environmental gains from increased natural gas infrastructure will be hampered.

There remains at present significant uncertainty and challenges in the coming years regarding the impact on such infrastructure from heightened federal regulatory obligations regarding endangered species and wetlands replacement.

On July 12, 2011, the Center for Biological Diversity settled with the U.S. Fish and Wildlife Service with an agreement that requires the federal agency to make decisions on listing as endangered nearly 800 species of plants and animals by 2017.[27] At present, there are 1,752 species of plants and wildlife on the federal endangered species list.[28] The litigation settlement, which was arrived at with no public comment, could represent a significant increase in the number of listed species. For Pennsylvania, the species awaiting a listing decision as a result of the settlement include the Eastern Massasauga rattlesnake and the Northern Long-Eared Bat – both of which have habitats that cover a great portion of Pennsylvania. The inclusion of these species would require additional and significant efforts by exploration and production companies, as well as midstream and interstate pipeline operators, to survey and avoid impacts to these species.

The U.S. Fish and Wildlife Service is moving forward with proposed endangered species listing of the Northern Long-Eared Bat.[29] The PA Chamber has previously commented to the agency regarding its significant concern that the underlying science does not warrant such a listing.[30] Further, as the PA Chamber noted in its comments regarding the proposed listing, the apparent decline (which has recently been arrested) in the population of the Northern Long-Eared Bat is a result of a fungal infection, not as a result of loss of habitat.

[26] Expedited Federal Authorization of Interstate Natural Gas Pipelines: Are Agencies Complying with EPACT? The INGAA Foundation, Inc. Dec. 21, 2012. http://www.ingaa.org/Foundation/Foundation-Reports/EPAct2005.aspx

[27] Landmark Agreement Moves 757 Species Toward Federal Protection. Center for Biological Diversity, July 12, 2011. http://www.biologicaldiversity.org/programs/biodiversity/species_agreement/

[28] Environmental Conservation Online System Species Report. U.S. Fish & Wildlife Service, July 2014. http://ecos.fws.gov/tess_public/pub/SpeciesCountReport.do

[29] Endangered and Threatened Wildlife and Plants; 6-Month Extension of Final Determination on the Proposed Endangered Status of the Long-Eared Bat. Federal Register Vol. 79, No. 125, Docket No. FWS-R-5-ES-2011-0024; 4500030113, June 30, 2014. http://www.fws.gov/midwest/endangered/mammals/nlba/pdf/FR6monthExtension30June2014NLEB.pdf

[30] Comments by the PA Chamber and PIOGA on Petition on Northern Long-Eared Bat Species. Pennsylvania Chamber of Business and Industry, Dec. 23, 2013. http://www.pachamber.org/advocacy/priorities/energy_environmental/environmental/testimony/pdf/PIOGA_and_PA_Chamber_joint_letter.pdf

Further, the U.S. Fish and Wildlife Service recently published a Notice of Final Policy re-interpreting the phrase "significant portion of its range" as it relates to listing decisions. [31] The PA Chamber is concerned this drastic reinterpretation, which is effective July 31, 2014, will have far-reaching impacts, given the rule lowers the threshold for determining a "significant" range portion.

The PA Chamber urges that the Quadrennial Energy Review note the tremendous uncertainty and cost to companies involved in constructing and operating natural gas infrastructure that will arise if the U.S. Fish and Wildlife Service continues to make listing decisions on the basis of litigated settlements and factors not relating to habitat, as has been done historically.

Further, as Pennsylvania's topography is replete with wetland and watersheds, nearly every pipeline project is obligated to obtain a Section 404 permit from the Army Corps of Engineers, pursuant to the Clean Water Act. Depending on the region of the state, one of three Army Corps district offices will have primacy in reviewing permit applications. PA Chamber members have noted inconsistency between the district offices with respect to expectations regarding information included in applications, review times, transparency in decision-making, and permitting obligations. Finally, and importantly, there are notable inconsistencies between the nationwide general permit that regulates projects subject to Section 404 permitting and the state programmatic general permit in Pennsylvania (PASPGP-4). The state general permit has adopted a definition of what constitutes a project that is much broader than the Army Corps of Engineers' longstanding regulatory definition. Further, the state programmatic general permit takes into account temporary impacts to wetlands when deciding how a project is categorized for review, even though such impacts involve no net loss of wetlands or waters of the United States. These departures have resulted in substantial permitting delays in Pennsylvania, as compared to neighboring states, such as Ohio and West Virginia, that operate under the nationwide general permit.

The PA Chamber urges that the Quadrennial Energy Review note the discrepancies between the district offices of the U.S. Army Corps of Engineers and that it recommend such offices operate in a more consistent manner, and that the present regulatory environment with respect to Section 404 permitting has resulted in unnecessary project delays in Pennsylvania.

Developers of permitted projects must avoid impacts to wetlands. When such impacts are unavoidable, permittees must mitigate such impacts in the form of wetlands replacement – and typically do so at a greater than 1:1 ratio. Such mitigation requirements may be satisfied in the form of an in-lieu fee program in which, generally, a permittee pays into a state-operated fund that will be used to restore or replace wetlands. Permittees may also replace wetlands themselves or via a contractor within the same affected watershed or purchase credits from a private wetlands banking operation. Recently, the PA Chamber urged, in a letter to the U.S. Army Corps of Engineers, that industry "continue to be afforded flexibility in complying with state and federal mitigation requirements, including the use of an in-lieu fee program."[32]

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[31] Final Policy on Interpretation of the Phrase "Significant Portion of Its Range" in the Endangered Species Act's Definitions of "Endangered Species" and "Threatened Species." Federal Register Vol. 79, No. 126, Docket No. No. FWS–R9–ES–2011–0031; FXES11130900000C6–145–FF09E42000, July 1, 2014. https://www.federalregister.gov/articles/2014/07/01/2014-15216/final-policy-on-interpretation-of-the-phrase-significant-portion-of-its-range-in-the-endangered

[32] Letter to U.S. Army Corps of Engineers re in-lieu fee program and related wetland mitigation. Pennsylvania Chamber of Business & Industry, May 8, 2014. http://www.pachamber.org/advocacy/priorities/energy_environmental/environmental/testimony/pdf/Wetlands_Letter.pdf

The PA Chamber urges that the Quadrennial Energy Review note the importance of an in-lieu fee program for the purposes of satisfying wetlands mitigation requirements.

A recently proposed joint rulemaking from EPA and the Army Corps of Engineers has clouded the potential wetlands mitigation responsibilities pursuant to the Clean Water Act.[33] The proposal purports to address recent Supreme Court decisions which have curbed the agencies' authority to regulate some intrastate water bodes that lacked a "significant nexus" to traditional navigable waterways. While a plurality of Supreme Court justices in the *Rapanos v. United States* decision interpreted the Clean Water Act to apply only to "relatively permanent, standing or continuously flowing bodies of water," Justice Kennedy wrote waters subject to regulation under the Clean Water Act "must possess a 'significant nexus' to waters that are or were navigable."[34]

The interpretive rule would expand Clean Water Act jurisdiction (and, by extension, relevant wetlands permitting and replacement obligations) significantly. All tributaries, not just those that are relatively permanent, would be subject to the Act, as would all waters "adjacent" to such tributaries. The proposed rulemaking relies heavily on a draft "Connectivity Report" that purports to synthesize "scientific literature pertaining to biological, chemical and hydrologic connectivity of waters and the effects that small streams, wetlands and open waters have on larger downstream waters."[35]

The PA Chamber notes that, given that state environmental regulations that are already more expansive than current federal requirements and that nearly all of Pennsylvania's waterways and wetlands are connected in such a way that such environmental features were already the subject of much of the related federal and state water and wetlands requirements, this rulemaking is unnecessary given the present regulatory environment in Pennsylvania. Additional regulatory overlays and administrative burdens are not needed to protect waters that are already subject to substantial environmental regulation beyond federal requirements.

The PA Chamber urges that the Quadrennial Energy Review note the significant regulatory uncertainty that has arisen as a result of the recently proposed "Water of the United States" rule.

Finally, the PA Chamber expresses its support for the approval and expansion of natural gas exports. As the previously cited analysis by Platts and Bentek noted, growth of domestic production is projected to outpace growth of domestic demand.[36] The expansion of natural gas exports will lead to continued economic development far beyond that which would be supported solely by keeping all of the United

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[33] Definitions of the "Water of the United States" Under the Clean Water Act. Federal Register Vol. 79, No. 76, Docket No. EPA-HQ-OW- 2011-0880 FRL-9901-47-OW, April 21, 2014. http://www.gpo.gov/fdsys/pkg/FR-2014-04-21/pdf/2014-07142.pdf

[34] *Rapanos v. United States*, 547 U.S. 715 (2006).

[35] Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of Scientific Evidence. U.S. Environmental Protection Agency Scientific Advisory Board. http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/Watershed%20Connectivity%20Report?OpenDocument

[36] Northeast Infrastructure Study: Leading the Market in a New Direction. Platts McGraw-Hill Financial & Bentek Energy, Sept. 10, 2013. http://anga.us/media/blog/C2FBB9E8-5056-9F69-D40DD63F89FBD0C3/files/BENTEK_Northeast_InfrastructureDeck_09102013V4.pdf

States' natural gas production at home for domestic consumption. Further analysis has shown that the country would reap net economic benefits from exports.[37]

Presently, companies seeking to export natural gas countries that do not have free trade agreements with the United States must be granted approval by the Department of Energy (DOE) that the project does not run afoul of the Natural Gas Act, which bars export projects that are "not consistent with the public interest."[38] Additionally, export facilities must obtain approval from the Federal Energy Regulatory Commission (FERC) under the National Environmental Policy Act (NEPA). To date, DOE has issued several "conditional" approvals of pending export facilities contingent upon FERC's approval under NEPA. Many more facilities are awaiting approval.

Unfortunately, the Department of Energy recently proposed to cease issuing conditional approvals until FERC approves projects under NEPA.[39]

<u>The PA Chamber urges the Quadrennial Energy Review to note the tremendous economic benefits that can be attained by encouraging the export of natural gas and to facilitate such exports by recommending DOE rescind its proposal to suspend conditional approvals.</u>

On several occasions during State of the Union addresses, the President of the United States of America has outlined broad support for increased development and use of natural gas. In his January 2012 State of the Union Address, he noted his administration "will take every possible action to safely develop this energy."[40] He also noted in his 2013 State of the Union Address, "the natural gas boom has led to cleaner power and greater energy independence. We need to encourage that. And that's why my administration will keep cutting red tape and speeding up new oil and gas permits."[41] Most recently in this year's State of the Union, the President remarked that, "[b]usinesses plan to invest almost $100 billion in new factories that use natural gas. I'll cut red tape to help states get those factories built."

In conclusion, the President has laid out clear policy goals for his administration and executive agencies to follow. As the PA Chamber has noted in this comment letter, there remain significant regulatory hurdles to overcome by those same executive agencies. The PA Chamber, on behalf of its members, appreciates the time and diligence of the staff of the Office of Energy Policy and Systems Analysis and the members of the Quadrennial Energy Review Task Force in reviewing this comments and using them to inform the recommendations and conclusions of the Quadrennial Energy Review.

Sincerely,

[37] NERA Releases Updated Study on Economic Impacts of LNG Exports. NERA Economic Consulting, March 6, 2014. http://www.nera.com/83_8451.htm

[38] 15 USC. § 717b(a).

[39] Proposed Procedures for Natural Gas Export Decisions. Department of Energy, May 29, 2014. http://energy.gov/fe/proposed-procedures-liquefied-natural-gas-export-decisions

[40] Obama Pushes Natural-Gas Fracking to Create 600,000 U.S. Jobs. Reuters, Jan. 25, 2012. http://www.bloomberg.com/news/2012-01-25/obama-backs-fracking-to-create-600-000-jobs-vows-safe-drilling.html

[41] President Obama Talks Energy at the State of the Union 2013. Department of Energy, Feb. 13, 2013. http://energy.gov/articles/president-obama-talks-energy-state-union-2013

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